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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/602,501	06/24/2003	Masayoshi Shinohara	42479.7900	2201

7590 11/29/2004

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EXAMINER	
CYGAN, MICHAEL T	
ART UNIT	**PAPER NUMBER**
2855	

DATE MAILED: 11/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/602,501	SHINOHARA ET AL.	
	Examiner	Art Unit	
	Michael Cygan	2855	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 October 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17 and 26-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *29* is/are allowed.

6)☒ Claim(s) *1-9,12,14 and 15* is/are rejected.

7)☒ Claim(s) *10,11,13,16,17 and 26-28* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1, 2, and 4-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wedding (US 5,317,930) in view of Millipore ("PTFE Membrane Filters", May 2001). Wedding teaches a particulate measuring apparatus which collects particles by drawing a sample gas through a fluorine resin filter membrane in the form of a continuous tape (column 11 lines 17 through column 12 line 20), measuring the pressure drop through the filter to determine particulate loading, and measuring particulate concentration through beta particle absorption; see abstract; column 5 line 28 through column 6 line 29; column 9 lines 45-55; column 10 lines 15-18 and Figure 5. The membrane is supported on a foraminous screen [118] in which can inherently be found at least four holes arranged in approximately circular symmetry; see Figure 2 and column 5 lines 51-53.

   Wedding teaches the claimed invention except for a reinforcing layer made of polyethylene on one side of the tape. Millipore teaches the use of fluorine resin membrane filters having polyethylene support bonded to one

side of the filter for air monitoring and filtering gases; see page 1. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use fluorine resin membrane filters having polyethylene support bonded to one side of the filter as taught by Millipore in the invention taught by Wedding to form the membrane filter, since Millipore teaches the advantage of easier handling and broad chemical compatibility.

With respect to claim 9, while Wedding is silent as to the screen hole shape, it is notoriously well known in the screen art for screens to possess a honeycomb arrangement, and it would have been obvious to one having ordinary skill in the art at the time the invention was made to use such honeycomb screens for the advantage of applying well characterized materials having predictable properties.

2. Claims 12, 14, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wedding (US 5,317,930) in view of Millipore ("PTFE Membrane Filters", May 2001) as applied to claim 1, further in view of Barringer (US 4,192,176). The claimed invention is considered to be taught except for the use of impact and cyclone filters removably attached. Barringer teaches the use of impact [13] and cyclone [40] filters removably attached to a particulate sampling assembly [11]; see column 2 line 46 through column 3 line 56. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use impact and cyclone

filters as taught by Barringer in the invention taught by Wedding to discard unwanted gas/material, since Barringer teaches that such gathers only particles of the size desired to be sampled and analyzed.

3. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wedding (US 5,317,930) in view of Millipore ("PTFE Membrane Filters", May 2001) as applied to claim 1, further in view of Johnson (US 4,866,277). The claimed invention is considered to be taught except for the use of error compensation due to naturally occurring radiation. Johnson teaches that background compensation, although not a perfect technique, is an important technique in radiation measurement of a material passing over a conveyor-type detection device when no special means of preventing background sources from causing errors are present; see column 1 line 11 through column 2 line 27. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use error compensation due to naturally occurring radiation as taught by Johnson in the invention taught by Wedding to analyze sensor results, since such would reduce errors as taught by Johnson.

Allowable Subject Matter

4. Claim 29 is allowed.

5. Claims 10, 11, 13, 16, 17, and 26-28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, since the prior art neither discloses nor fairly teaches the limitations positively recited in the claims.

Response to Arguments

6. Applicant's arguments filed 22 October 204 have been fully considered but they are not persuasive. Applicant's arguments directed to the combination of references are not persuasive, since the Millipore reference teaches advantages of utilizing a polyethylene support on a fluorine resin filter, thereby providing a reasonable expectation of some advantage resulting from the combination. Applicant's arguments as to the specific properties of applicant's filter tape were persuasive in finding claims 26-29 unobvious over the prior art, since those claims contain limitations directed to applicant's novel improvements.

7. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time

the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). With respect to the rejections under Barringer, Barringer teaches that the use of such a separator in combination with a filter allows rejection of particles of unwanted size, thereby providing a reasonable expectation of some advantage resulting from the combination.

8. In response to applicant's argument that Johnson is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, both references concern the measurement of radiation from a continuous conveyor bearing radioactive material. Such a similarity of design and purpose is sufficient to reasonably motivate one having ordinary skill in the art to utilize the advantage of background radiation reduction which is also common to both systems. Furthermore, the time-honored technique of background reduction is so ubiquitous in the sensing art that one would be hard pressed to find an inventor unaware or unconcerned with improvements in reducing outside influences on measurements.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

10. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Cygan whose telephone number is (571) 272-2175. The examiner can normally be reached on 8:30-6 M-Th, alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on 571-272-2180. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).